[Cat. No.] TA-1014-1

Introduction

- Bioneer AccuNanoBead C18 (Reversed-Phase) magnetic NanoBeads are uniform, silica-based, para-magnetic beads containing hydrophobic C18 Alkyl groups on their surface. The beads are specifically designed for quickly purifying, desalting and concentrating femtomolar to picomolar scale of peptides or proteins, manually or automatically without the need for laborious repeat pipetting and centrifugation. C18 Magnetic Nanobeads are recommended for purification, desalting and concentration of low molecular weight proteins or peptides.

Features & Benefits

- AccuNanoBead™ C18 Nano Beads is silica magnetic nano beads containing hydrophobic C18 alkyl groups on the surface. It can be combined with peptides or proteins by using strong hydrophobic absorption interaction. Therefore, the beads can be used for purification and concentration of peptides or protein fragments and desalting prior to mass-spectrometry (MS) analysis

Components

Components	Amount
AccuNanoBead™ C18 Magnetic NanoBeads	0.5 g

*** Note:** For research use only. Not for use in diagnostic or therapeutic procedures.

Materials to be Prepared by User

Magnetic Separator	
Equilibration buffer	0.5% TFA (trifluoroacetic acid) in 5% ACN (acetonitrile)
Sample Binding Buffer	2% TFA in 5% ACN
Washing buffer	0.5 % TFA in 5% ACN
Elution Buffer	70% ACN

*** Note:** Buffer could be changed depending on user's needs.

Specifications

AccuNanoBead™ C18 Magnetic NanoBeads	
Composition	C18 Magnetic NanoBeads
Binding capacity	≥ 300 nmol/g-beads
Size	Average 400 nm
Concentration	0.5 g(Solid)

Storage

Store at room temperature.
This product can be stable for 3 years at room temperature (25°C).

Expired date

Indicated on the label.

Precautions

- Do not vigorously vortex *AccuNanoBead*™ C18 Magnetic NanoBeads.
- An exact protocol may need to be optimized by the user

Online Resources

Korean English

Visit our **product page** for additional information and protocols

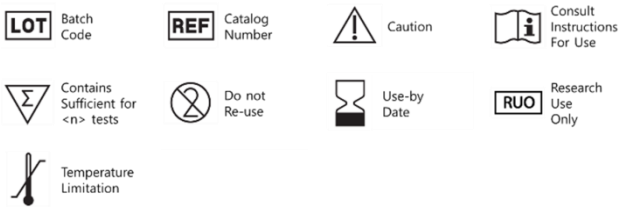
Ordering Information

Description	Cat. No.
AccuNanoBead™ C18 Magnetic NanoBeads	TA-1014-1

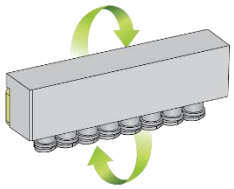
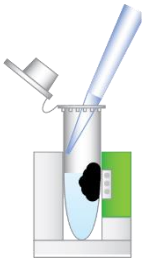
Notice

BIONEER corporation reserves the right to make corrections, modifications, improvements and other changes to its products, services, specifications or product descriptions at any time without notice.

Explanation of Symbols



Experimental Procedures (The protocols are scalable and can be optimized)

Steps		Procedure Details
1	 **Magnetic Beads Preparation**	1. Suspend the magnetic beads with 50% Methanol (concentration of 50mg/ml), mix very well by vortex. 2. Transfer 10µl (50 mg/ml) of completely suspended magnetic beads to a microcentrifuge tube. 3. Place the tube onto a magnetic separator for 1-3 minutes until the supernatant is clear. 4. Aspirate and discard the supernatant with a pipette while the tube remains in the separator. 5. Remove the tube from the separator and resuspend the beads with 100 µl Equilibration buffer. 6. Repeat steps 2 to 5 for three times. 7. Resuspend the beads with 10µl Equilibration buffer.
2	 **Binding**	1. Mix sample (~10µg protein/ peptide) with 1/3 volume of Sample Binding Buffer and add to the tube containing the washed beads from step 2.1.6. 2. Thoroughly mix beads and sample using a pipette and leave at room temperature for 2 minutes to allow proteins to bind to the beads. 3. Place the tube onto the magnetic separator for 1-3 minutes (no longer than 3 minutes) until the supernatant is clear. Aspirate and discard the supernatant with a pipette while the tube remains in the separator. 4. Remove the tube from the separator and resuspend the beads with 100µl washing buffer. 5. Place the tube onto the magnetic separator for 1-3 minutes until the supernatant is clear. Aspirate and discard the supernatant with a pipette while the tube remains in the separator. 6. Repeat steps 2 to 5 for four times.
3	 **Elution**	1. Remove the tube from the separator, add 5µl elution buffer, resuspend the beads and incubate for 2 minutes at room temperature. 2. Place the tube on the magnetic separator for 1-3 minutes and transfer the supernatant containing the eluted protein to a new tube. (User should optimize elution conditions for individual proteins by adjusting acetonitrile concentrations, such as 20%, 50%, 80%). 3. For MALDI-MS analysis, mix 1µl of the eluate with 1µl of matrix solution and spot 0.5µl onto a MALADI-MS target plate.